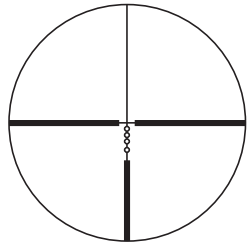
Thank you for selecting this Nikon riflescope. We sincerely appreciate your trust in our products. Nikon riflescopes offer superior optics, rugged construction and reliable performance. Your new Nikon scope offers an intangible that is essential to good shooting-confidence. Whether you are firing the final shot into a one-hole group or placing your crosshairs on the trophy of a lifetime-you can trust that your Nikon will do its job.

Your riflescope features Nikon's new BDC reticle. BDC stands for Bullet Drop Compensation-a fancy term for hold-over. If a longer shot presents itself, the BDC will provide confident hold-off capabilities if the shooter has done his homework.

This simple, effective reticle design can be custom tailored for the trajectory of your ammunition. The "ballistic" circles on the lower vertical crosshair enable you to accurately compensate for bullet drop out to at least five hundred yards with most calibers. Nikon has designed this BDC reticle to blend simplicity with accuracy-a difficult challenge considering the huge number of variables involved in placing a bullet drop compensating scope on a rifle. These would include:



- The mounting system and how true it positions the scope to the center-line of the bore
- The make, model and caliber of rifle involved
- The rifle's condition and inherent accuracy
- The ballistics performance of the ammunition-accuracy, velocity, uniformity and bullet characteristics such as ballistics co-efficients.
- A final variable is you - the shooter!

Mounting the Scope on your Rifle

Your new scope must be properly mounted to ensure accurate and reliable use in the field. Here are some of the basics:

- All base and ring screws should be properly tightened.

Now for the neat trick! Replace the rifle in the shooting rest and place the crosshair intersection on the aiming dot. Without moving the rifle, move the crosshairs to the bullet hole. The rifle must remain absolutely stationary as the adjustment is made. Best to have a friend carefully turn the turrets while you look through the scope and provide directions. Fire one shot to confirm that your scope is now zeroed on the close range dot. Make minor corrections if required. The object is to get the point of aim identical to the point of impact.

Now move your large target paper to one hundred yards. Enlarge the aiming dot to two inches with your felt pen. Place small pieces of masking tape over the short-range bullet holes or simply mark them with the felt pen. Now fire a shot and again the bullet should hit somewhere on the large target paper. You can repeat the previous technique of moving the crosshairs to the bullet or simply measure how much correction will be required to bring the bullet to the aiming dot. If you are six inches low and four inches right, move the elevation turret 24 clicks up and the windage turret 16 clicks left. Once again-the objective is to get the point of aim identical to the point of impact.

Using the Nikon BDC Reticle

You have no doubt noticed the series of round circles in the lower vertical section of the BDC reticle. These circles are positioned to enable accurate placement of shots out to four hundred or six hundreds yards, depending on the caliber of your rifle. The NIKON BDC reticle system is user-adjustable. The shooter can actually tailor the performance of the reticle to his particular rifle and load.

Nikon suggests the use of a laser rangefinder to ensure accurate distance determination for longer shots. Nikon offers a complete line of rangefinders that are optimized for hunting. We must know the distance to our target for correct hold-offs.

There are two challenges for accurate placement of shots-bullet drop and wind drift. Wind drift is the most difficult since wind speed and direction are infinite variables. At five hundred yards a ten mile per hour cross-wind can drift a bullet up to two feet depending on velocity and bullet design. There is only one way to learn to shoot in wind and that is getting out there and shooting in windy conditions. Keep notes on wind speed and wind direction in relation to bullet travel because this information is easily forgotten.

Trajectory is much easier to handle since gravity affects our bullets quite uniformly. The Nikon BDC reticle will become your partner as you prepare for the eventuality of long shots. Close shots are recommended but some game species and habitats require longer shooting. Shots past 250 to 300 yards require hold-offs with most popular hunting cartridges.

Nikon has developed a simple technique for tuning the accuracy circles in the BDC reticle to the trajectory of your particular load. The bottom line is that we must shoot under controlled circumstances so that reticle performance can be tailored properly. This requires a safe shooting location, large targets to ensure catching every bullet, good shooting rests and a uniform loading technique. The range must be at least four or five hundred yards long. If you do not have a formal range to shoot on locate a piece of land that would offer safe long range shooting. Obtain permission from the landowner to do some target shooting.

Before going to the range spend a few minutes checking the bolts and screws on your rifle and scope mounts. Loose bolts and screws will destroy accuracy. Your barrel should be clean and free of accuracy robbing copper-fouling. Your scope lenses should be clean. Your ammunition should be the most accurate you can purchase or reload for your particular rifle. The final consideration is you-the shooter. The more we shoot the better our skills become. There is simply no substitute for practice. This takes time and a commitment. The rewards are confidence and the satisfaction of making any shot, whether easy or difficult.
We need to shoot as accurately as possible so the rifle must be supported at the front and rear in good sandbags or rests. This shooting is intended to test the rifle so minimize shooter-error by using good rests.

Here are some bench and field marksmanship basics that might be of value.

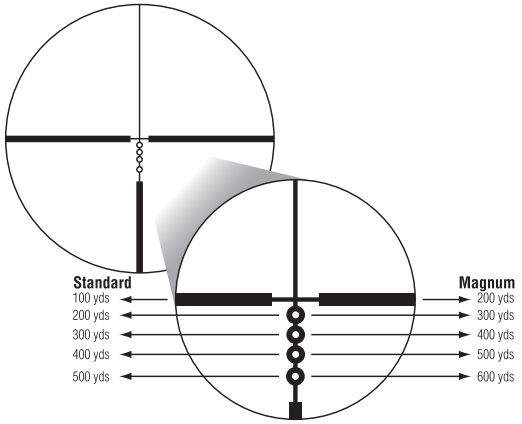
- Ensure the rifle is perfectly stable and rested. A good shooting rest and sandbags are essential for bench accuracy. In the field use a bipod, shooting sticks or any padded object to support the fore-end. Use another object to support the rear portion of the stock if at all possible.
- Do not allow the barrel to contact any object in any way. On the bench do not allow the front swivel stud to contact the sandbag during recoil.
- Think TRIGGER CONTROL. Use the front section of your trigger finger on the trigger and break the trigger with total smooth control. No jerking. No contact with the trigger guard. Try cupping the palm of your shooting hand slightly with the bottom three fingers controlling the rifle.
- Ensure your breathing is smooth and regulated. If you are out of breath take three or four quick, deep breaths to obtain smoother control. Break the shot at the end of a breath, do not hold your breath. Shoot in the natural respiratory pause.
- In the field you should use your entire body as a shooting platform. Support the rifle with your bone structure rather than your muscles if possible. Always look for an expedient field rest. Even in the field try to rest the front and rear of the rifle during the shot.
- Send the shot within four to six seconds-your eyes can only retain sharpest focus for a short period of time. Look away and refocus if the sight-picture becomes blurred.
- Uniformity in holding the rifle-cheek contact, position of hands on the trigger, pistol grip and fore-end and the position into the shoulder determine accuracy.

The Nikon BDC reticle has been designed to offer "generic" hold-off points that will accommodate most centerfire cartridges and bullet weights. There is only one way to determine how the accuracy circles work with your rifle and load-that is by actual shooting. The Nikon BDC will offer hold-off aiming points for two hundred, three hundred, four hundred and five hundred yards. For maximum confidence we suggest shooting your rifle at these distances. Generally speaking the reticle is designed to offer hold off points in one hundred yards increments from 100-500 yards using standard centerfire calibers with approximate muzzle velocities around 2,800 FPS(feet per second). When sighted in at 200 yards using magnum centerfire cartridges such as those with muzzle velocities of 3,000 FPS or greater the reticle can provide accurate hold of points for 300, 400, 500 and 600 yards. See the illustration on page 8.

Let's face it, right out of the box no reticle can be expected to match every rifle and every trajectory perfectly. That is simply impossible given all of the variables. What is possible is to offer a simple reticle design that can be adjusted or tailored to work with almost any rifle and ammo combination if the shooter does his homework. This requires one key element-the shooter must understand how the system works and he must go out and shoot his rifle at a variety of distances. He must determine the distance that he can shoot with confidence. How far out can you place your first shot into a ten-inch paper plate-every time? Let's call that your personal lethal hunting distance. The Nikon BDC reticle will help you extend your personal lethal hunting distance and to shoot with complete confidence within that range.

Other variables that can effect your setup are:

- temperature
- humidity
- altitude
- barrel length
- bullet design
- cleaning techniques
- the final variable is you-the shooter!



If your particular firearm setup does not match the drop chart above, have not fear, the BDC reticle can and will still work perfectly for you. By using a 2" circle (subtension at 100 yards) instead of a dot or hash mark, you have multiple aiming points (top, middle and bottom of the circle) to customize the reticle to you specific firearm. The circle allows you to see the target with obstructing it and still fits well within the body of big game animals out to 600 yards. Should your firearm perform in a manner that is not consistent with the image above, use the technique mentioned later to maximize your firearms performance and customize the reticle to your particular setup.

The Nikon BDC can be fine-tuned to your requirements by a simple field shooting procedure as follows:

Zero the scope at one hundred yards so that your point of impact is identical to the point of aim. If you are interested in shooting longer then move the point of impact up two or three inches above the point of aim.

- Set up a large cardboard target. The target should be at least three or four feet tall and two or three feet wide. Larger is better since we must catch each shot fired. Place an aiming mark at the top of the large piece of cardboard.
- Either move your firing position or the target out to the longest range you can consistently place three shots into a ten or twelve inch circle. If you have not determined this distance you should do so before proceeding.
- This will be your maximum lethal range for hunting under reasonable conditions. Use a circle that measures the same as the vital zone on the animal you are likely to hunt. For southern deer this would be ten inches. For the larger northern deer this would be at least twelve inches.

- Simply shoot three or five shots using your one hundred yard setting at distances until your group size exceeds ten or twelve inches. Do not be concerned about bullet drop. We just want to know how far you and your rifle can hit a target with lethal consistency. Most individuals will find that four hundred yards or slightly more will be the absolute maximum that they can maintain lethal accuracy.
- After determining your maximum lethal range shoot a group at that distance-three or five shots will suffice.
- Mark the center of the group with a large X using your felt marking pen.
- Go back to the firing position and align your scope on the aiming point and note where the X is relative to the accuracy circles. Do not be concerned if the group is not in a particular circle.
- Vary the power setting on the scope to move the closest circle to the center of the group. You might prefer to use the center, top or bottom of an accuracy circle, your choice. You now have a 100-yard zero and a maximum down-range zero.
- Note the power setting that enables the 500(or 600) yard zero and do not move the magnification ring. You might consider a dab of nail-polish to mark the spot so you can return easily.
- Move your target to intermediate distances in one hundred yard increments and repeat the firing procedure. Note exactly where your groups form relative to the circles. Do not move the magnification ring on the scope. Note the relationship between the center of each group and the circles and make simple notes to describe the correlations.
- Consider moving your targets in 50 yard increments to fine-tune the relationship of the accuracy circles to the actual trajectory of your bullets.
- Keep accurate notes of your shooting. You will require good information when you prepare your drop chart.

You now have exact zero information for 100, 200, 300, 400, 500 or distance you determined to be your maximum. We suggest a simple drop-chart, taped to your stock, for field use. Accuracy circles are very adaptable. We can use three aiming locations, the intersections at the top and bottom with the vertical crosshair or the center of the circle. After tailoring the Nikon BDC reticle your long-range hold-offs will be based on confidence rather than guess-work!

Care of your Nikon Scope

Rifle scope lenses should be kept as clean as possible during use. Never clean debris and marks from scope lenses by rubbing with a dry cloth or tissue. Always moisten the lens before wiping. Preferably brush loose material from the lens surface, moisten with a lens cleaning fluid and then wipe clean in circular motions. Lens cleaning solutions are available in spray-pump containers or simply apply a few drops to the lens cleaning cloth.

The following NIKON LENS Cleaning accessories are highly recommended for keeping your optics in excellent condition. These can be found at your local Nikon dealer.

- Nikon Lens Pen-Simply brush first, then exhale on the lens to moisten and immediately rotate the soft cleaning pad over the marks. Work the pad in diminishing circles on the lens, ending with a simple twirl in the center.
- Nikon Micro Fiber Cleaning Cloth
- Nikon lens cleaner spray and moist cloths

Wipe the main tube of your scope with a clean dry cloth to remove fingerprints and surface blemishes. Debris such as mud should be removed with a water-moistened cloth with soft rubbing, followed by a light wiping with a dry cloth.